

ABSTRACT OF THE DISCLOSURE

An intraluminal grafting system having a balloon catheter assembly, a capsule catheter assembly and capsule jacket assembly is used for deploying in the vessel of an animal body a bifurcated graft having a plurality of attachment systems. The deployment catheters contain an ipsilateral capsule assembly, a contralateral capsule assembly and a distal capsule assembly, wherein the attachment systems of the bifurcated graft are disposed within the three capsule assemblies. A removable sheath of the capsule jacket assembly covers the bifurcated graft and capsule assemblies to provide a smooth transition along the length of the deployment catheters. The bifurcated graft is comprised of a main tubular member and two tubular legs, having attachment systems with wall engaging members secured to the superior end of the main tubular member and the inferior ends of the tubular legs. An inflatable membrane configured on the balloon catheter is used to firmly implant the attachment systems within the vessel. The bifurcated graft and attachment systems are configured to remain in the vessel after the deployment catheters are withdrawn. The method of use of the present intraluminal grafting system is also disclosed, for example, for deploying a bifurcated graft proximate the abdominal aortic bifurcation.